



THE JOINT CHIEFS OF STAFF
WASHINGTON, D.C. 20315

SJCS


HJCS-110-82
29 June 1982

MEMORANDUM FOR THE SECRETARY OF DEFENSE

Subject: Joint Operational Requirement for Survivable and
Endurant Strategic Communications (U)

1. (U) The statement of requirement in the Enclosure for a survivable and endurant strategic communications capability has been approved. The needs of the unified and specified commands have been considered in its preparation. It supersedes the Appendix to JCSM 353-78, 13 December 1978, "Requirement for Survivable and Endurant Strategic Communications."
2. (U) The Enclosure is forwarded for use as an explicit statement of requirement for the program intended to provide assured and flexible communications to support strategic force operations in all threat environments. Although no single program will satisfy all aspects of the stated requirement, the contribution made by each should be considered when evaluated against feasibility and cost.
3. (U) Without attachment, this memorandum is downgraded to CONFIDENTIAL.

For the Joint Chiefs of Staff:


JAMES E. DALTON
Lieutenant General, USAF
Director, Joint Staff

Attachment

CLASSIFIED BY DIRECTOR, C3 SYSTEMS
REVIEW ON 22 FEBRUARY 2002
EXTENDED BY DIRECTOR, C3 SYSTEMS
REASON: 5200.1R, PARA 2-301c5

* Enclosure to JCS 2510/611

[REDACTED]

ENCLOSURE

JOINT OPERATIONAL REQUIREMENT FOR SURVIVABLE
AND ENDURANT STRATEGIC COMMUNICATIONS (U)

SECTION I

STATEMENT OF NEED (U)

1. (U) Purpose. The purpose of this document is to establish the joint operational requirement for the communications capabilities needed to provide assured user-to-user strategic communications connectivity in peacetime, during the transition to nuclear war, through the period of nuclear conflict, which may be protracted, to the termination of hostilities, and in the postwar recovery period, to support the accomplishment of national guidance.

2. (U) Definition. Strategic communications systems must provide secure, assured, timely and flexible communications to support C2 of strategic forces that are designed for employment in nuclear warfare on an intercontinental scale and to airlift forces in direct support of nuclear warfare activities (e.g., transfer of nuclear weapons, damage assessment, etc.).

[REDACTED]

3. (U) Introduction. Policy guidance for the employment of nuclear weapons (NUWEP) states that deterrence of direct attack, particularly a nuclear attack, on the United States and its allies is the most fundamental national security objective. Nonetheless, the NUWEP recognizes that a nuclear attack could occur and become a protracted conflict.

[REDACTED]

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Enclosure

[REDACTED]

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[REDACTED]

4. (S) Background. Strategic C2 communications systems must support a definable set of functions in peacetime, during an initial response to nuclear attack, and during, as well as after, protracted nuclear conflict.

[REDACTED]

a. (S) Peacetime (preattack). Continuity and utilization of communications systems and communications support through all levels of conflict should be maximized.

[REDACTED]

[REDACTED] In peacetime, strategic communications must function reliably and support the fundamental objective of deterrence while maintaining positive control of forces

[REDACTED]

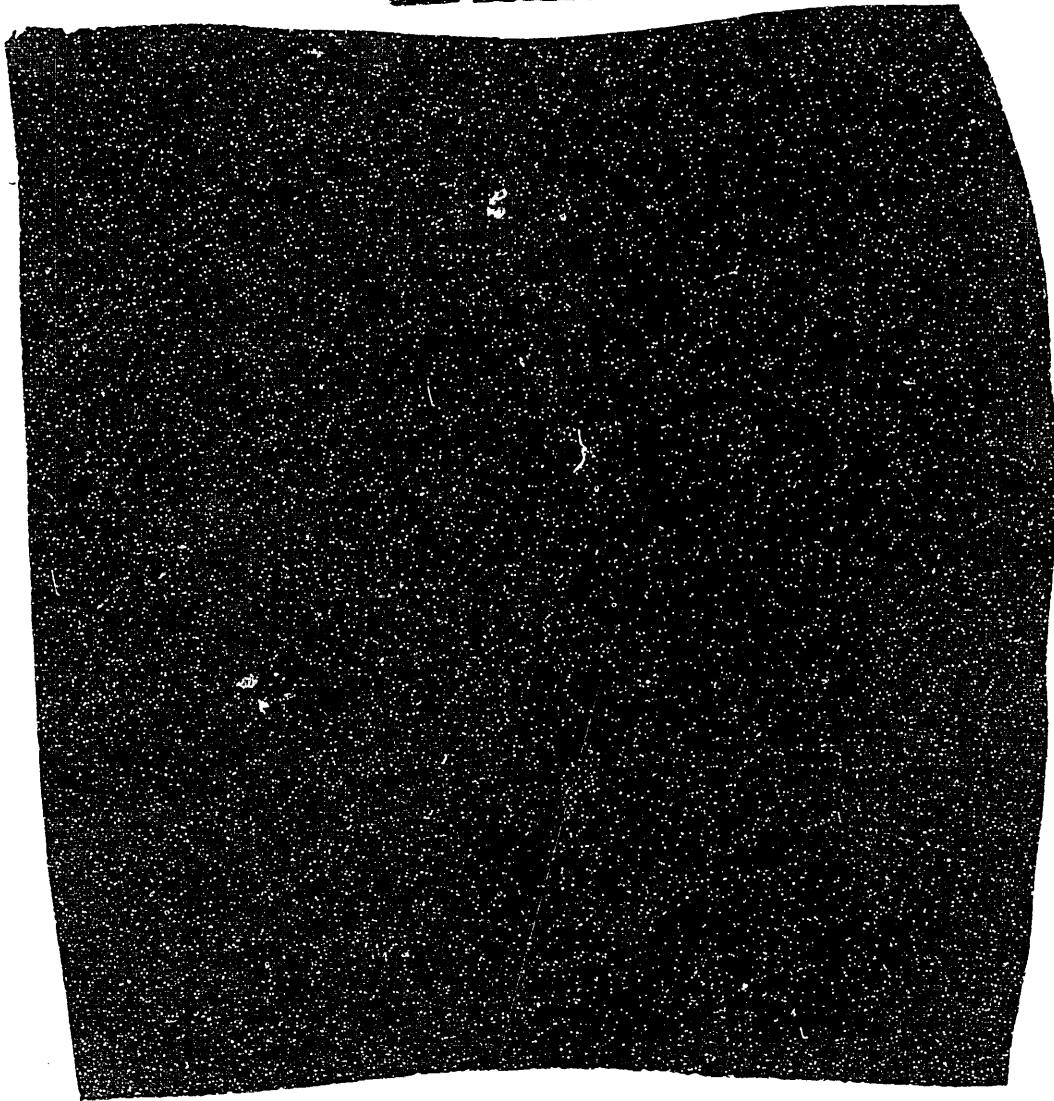
[REDACTED]

[REDACTED] To assure high confidence in their effectiveness, strategic communications systems, in conjunction with forces and other command and control elements, must be frequently exercised in ways that simulate wartime conditions as closely as possible to insure their capability to operate in wartime.

[REDACTED]

[REDACTED] The systems must be capable of transferring information among users securely, accurately, and rapidly and must be fail safe.

[REDACTED]

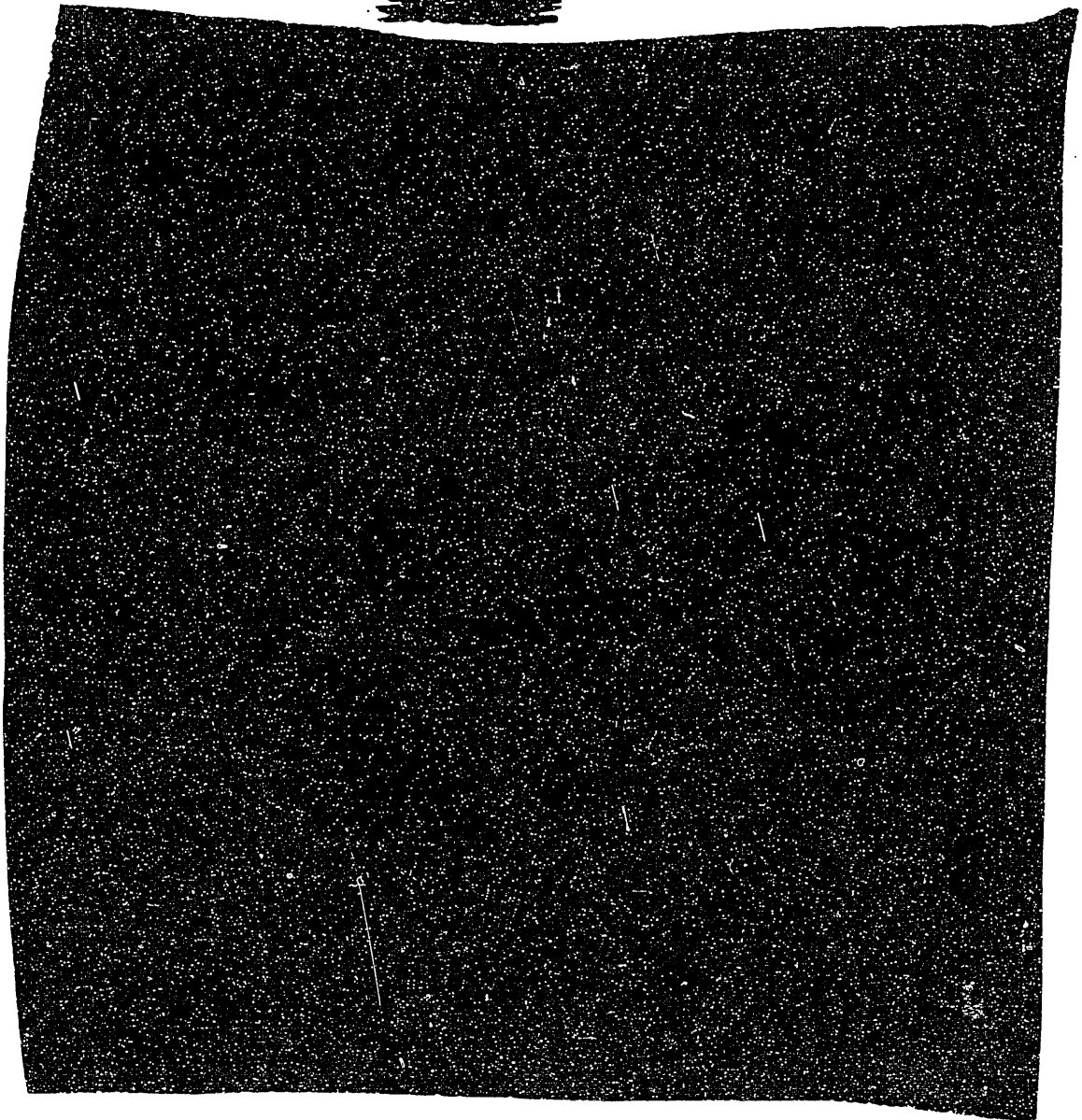


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[REDACTED]

4



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c. (S) Protracted Nuclear Conflict

[REDACTED]

As was the case for initial response, future military communications satellites supporting protracted nuclear conflict must meet the same requirements of paragraph 4b above.

[REDACTED]

Enemy efforts to exploit friendly radio communications systems for the purposes of determining US intentions, identifying surviving strategic targets for follow-up attacks, and deception, can be expected.

d. (25) Postwar Recovery Period. Following the termination of nuclear conflict, strategic communications capabilities must be capable of performing the functions identified in subparagraphs 4b and 4c above.

[REDACTED]

[REDACTED]

While the threats to the strategic communications system in this time period may be less severe than that which existed at the outbreak of hostilities, the additional problems of reduced security, maintenance, and other support capabilities will exist in the post-conflict period.

EXISTING SYSTEMS

[REDACTED]

Communications interfaces must be sustained or reconstituted between forces and command centers and sources of consumables such as food, water, POL, and spare parts.

SECTION II

STATEMENT OF OPERATIONAL CAPABILITY (U)

6. (U) System Functional Requirements and Operational Concepts

a. Peacetime (Preattack)

[REDACTED]

Peacetime planning, development, and exercise activities for secure strategic

[REDACTED]

communications systems must satisfy the requirement for assured end-to-end communications connectivity in all wartime environments. Such activities must recognize that all functions identified in the preceding statement of need are essential.

[REDACTED]

(1) (S) The minimum warning, command and control, and strategic force elements that peacetime strategic communications systems planning, development, and exercise activities must support include the:

(a) (U) NCA.

(b) (U) National Military Command System (NMCS).

(c) (U) Headquarters, alternate headquarters, emergency relocation sites, and airborne command posts of the commanders of unified and specified commands.

(d) (U) Service Headquarters and all commands that are assigned mission responsibilities directly supporting strategic warfare preparation, readiness, or recovery and reconstitution.

(e) (U) TW/AA system elements; ground based, airborne, and spaceborne.

(f) (S) Strategic nuclear forces, including:

1. (U) Bombers and tankers, while airborne, or on the ground at CONUS main operating or dispersal bases, or at overseas bases.

2. (S) ICBMs at CONUS locations, ~~including test facilities at Vandenberg AFB, California.~~

3. (U) SSBNs, while in port or at sea, in alert, modified alert, or nonalert status.

(g) (S) WHMCCS airborne elements on airborne or ground alert in CONUS and at overseas locations.

(h) (S) Airlift projection forces while at CONUS main operating bases or dispersal bases.

[REDACTED]

(1) ~~40~~ All forces and facilities committed to NUTEP reconnaissance - including main and forward operating bases and reconnaissance forces while airborne.

(j) ~~40~~ North American aerospace defense forces including AWACS, operating over CONUS or overseas.

(2) (U) Special Considerations for Peacetime Activities

(a) ~~40~~ Survivable and Reconstitutable Strategic Communications Systems. It is anticipated that no single system can provide the support required for all the functions that must be performed by time period, considering the different environments that can exist and the command and force elements that must be connected. These time periods, environments, and command and force elements are described in the preceding statement of need.

[REDACTED]

Where survivable and
endurant capabilities cannot be assured, reconstitutable
nuclear hardened capabilities are required. A balance
between survivable and reconstitutable systems is
desirable due to the functions to be performed and
the environments that may exist over the period of a
protracted conflict.

[REDACTED]

[REDACTED]

(b) ~~(S)~~ Record and Voice Communications Systems. With one exception, all functional requirements may be satisfied by combinations of secure record or voice communications systems. For these requirements, the specification of the media mix for strategic communications systems is best left to the appropriate task organizations.

[REDACTED]

(d) ~~(S)~~ Time Line Criteria for Information Transfer. These criteria are established by JCSCM-236-78, 12 July 1978, "Tactical Warning and Attack Assessment Requirements in Support of Presidential Retaliatory Execution of the SIOP" and SI-17-78 to Director, DCA, 16 January 1978, "SIOP Communications" as may be amended in the future.

(e) ~~(S)~~ Systems Security. Facilities which produce and distribute secure codes, authenticators, and other materials essential to secure communications are vulnerable to destruction or severe disruption by the initial enemy attack.

[REDACTED]

[REDACTED]

Designers and operators of US/ Allied commercial communications satellites should be encouraged to include nuclear hardening in their systems specifications so that commercial satellites can be used to complement surviving military satellites.

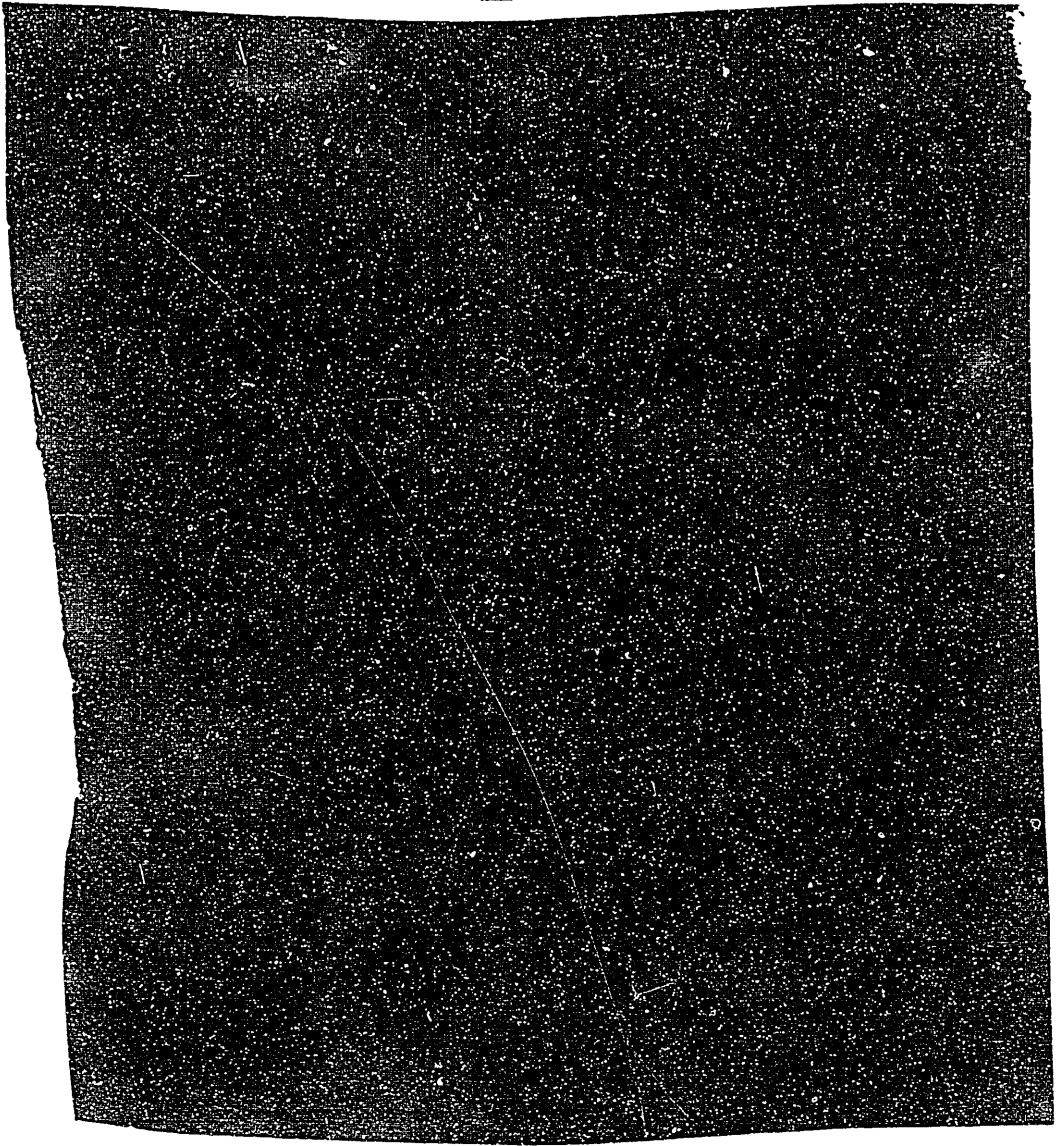
(g) (2) Personnel Protection. Strategic communications facilities must provide nuclear, biological, and chemical (NBC) protection of personnel to minimize losses. Personnel must also be protected from injury that might otherwise result from civil disturbance or terrorism during a protracted conflict.

(h) (U) System Performance Criteria. Strategic communications performance criteria are contained in JCS Pub 19, Volume 4.

(i) (U) System Maintenance. The systems and capabilities designed or planned to provide survivable and enduring strategic communications in wartime environments must be supported, to the maximum extent feasible, by military personnel.

b. Initial Nuclear Response. [REDACTED]

[REDACTED]



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[REDACTED]

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PARTIAL TRANSCRIPTION - ORIGINAL FOLLOWS

(3) The Fleet Ballistic Missile (FBM) submarine (SSBN) force is the most survivable and enduring leg of the strategic TRIAD today. Accordingly, the requirement for employment decisions and for communicating orders to the FBM submarines is least time urgent. However, SSBN operational procedures, which help assure covertness (and therefore survivability and endurance) significantly constrain options for transmitting orders to them.

[REDACTED]

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[REDACTED]

c. (S) Protracted Nuclear Conflict.

[REDACTED]

(1) Special Considerations

Designers of new strategic communications capabilities must be cognizant of these programs to insure timely availability and compatibility of the communications needed to connect these evolving programs.

For this reason, designers must include NBC protection of communications facilities to minimize personnel losses. New strategic communications capabilities must provide high availability and be capable of autonomous operation to the maximum degree that is technically possible. For systems of this type, electrical power becomes an important consideration.

[REDACTED]

A complementary set of satellite, airborne, and terrestrial communications capabilities are required to provide the necessary redundancy for assured global connectivity in a protracted conflict.

d. Postwar Recovery Period. [REDACTED]

[REDACTED] The hardware and employment strategies, including reconstitution of communications should not deviate significantly during these periods. Strategic communications in the postwar recovery period must be highly autonomous and easily reconstitutable. They serve the NCA to provide essential information to stabilize and prevent deterioration of national resolve and provide rapid, appropriate relief to isolated areas and surviving portions of the military and civilian infrastructure.